

What is claimed:

1. A composition comprising an RNA interfering agent which inhibits expression of an apoptosis-related gene.
- 5 2. A composition comprising an RNA interfering agent which inhibits expression of a proinflammatory cytokine.
3. The composition of claim 1, wherein said apoptosis-related gene is an
10 anti-apoptotic gene.
4. The composition of claim 1, wherein said apoptosis-related gene is a pro-apoptotic gene.
- 15 5. The composition of claim 1, wherein said agent is an RNA which is homologous to an apoptosis-related gene, or a fragment thereof.
6. The composition of claim 1, wherein said agent is an RNA which is homologous to proinflammatory cytokine, or a fragment thereof.
20 7. The composition of claim 4, wherein said pro-apoptotic gene is a Fas pathway molecule, or a fragment thereof.
8. The composition of claim 7, wherein said Fas pathway molecule is Fas or
25 FasL, or a fragment thereof.
9. The composition of claim 6, wherein said proinflammatory cytokine is IL-1 or TNF α , or a fragment thereof.
- 30 10. The composition of claim 6, wherein said agent is a double-stranded, short interfering RNA (siRNA) which is homologous to an apoptosis-related gene, or a fragment thereof.

11. The composition of claim 5, wherein said agent is a double-stranded, short interfering RNA (siRNA) which is homologous to a proinflammatory cytokine, or a fragment thereof.

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12. The composition of claim 10, wherein said apoptosis-related gene is an anti-apoptotic gene.

13. The composition of claim 10, wherein said apoptosis-related gene is a
10 pro-apoptotic gene.

14. The composition of claim 13, wherein said short interfering RNA (siRNA) is homologous to a Fas pathway molecule of a fragment thereof.

15. The composition of claim 14, wherein said Fas pathway molecule is Fas or FasL, or a fragment thereof.

16. The composition of claim 11, wherein said proinflammatory cytokine
20 molecule is IL-1 or $\text{TNF}\alpha$, or a fragment thereof.

17. The composition of claim 10 or 11, wherein said siRNA is about 21 nucleotides in length.

18. The composition of claim 10 or 11, wherein said siRNA is double
25 stranded and contains a 3' overhang on each strand.

19. The composition of claim 18, wherein said overhang comprises about 1 to about 6 nucleotides on each strand.

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20. The composition of claim 18, wherein said overhang comprises about 2 nucleotides on each strand.

21. The composition of claim 15, wherein said first strand comprises the sequence of SEQ ID NO:1 and said second strand comprises the sequence of SEQ ID NO:2.
- 5 22. The composition of claim 15, wherein said first strand comprises the sequence of SEQ ID NO:3 and said second strand comprises the sequence of SEQ ID NO:4.
- 10 23. The composition of claim 15, wherein said first strand comprises the sequence of SEQ ID NO:9 and said second strand comprises the sequence of SEQ ID NO:10.
- 15 24. The composition of claim 15, wherein said first strand comprises the sequence of SEQ ID NO:11 and said second strand comprises the sequence of SEQ ID NO:12.
25. The composition of claim 10, wherein said siRNA is capable of inducing or regulating degradation of an apoptosis-related gene mRNA.
- 20 26. The composition of claim 10, wherein said siRNA inactivates an apoptosis-related gene by transcriptional silencing.
27. The composition of claim 10 or 11, further comprising a pharmaceutically acceptable carrier.
- 25 28. A vector comprising a DNA template which encodes an RNA which is homologous to an apoptosis-related gene and is capable of promoting apoptosis-related gene RNA interference.
- 30 29. A vector comprising a DNA template which encodes an RNA which is homologous to an apoptosis-related gene and is capable of promoting apoptosis-related gene RNA interference.

30. The vector of claim 28, wherein said apoptosis-related gene is an anti-apoptotic gene.

31. The vector of claim 28, wherein said apoptosis-related gene is a pro-
5 apoptotic gene.

32. The vector of claim 31, wherein said apoptosis-related gene is a Fas pathway molecule.

10 33. The vector of claim 32, wherein said Fas pathway molecule is Fas or FasL, or a fragment thereof.

34. The vector of claim 29, wherein said proinflammatory cytokine molecule is IL-1 or TNF α , or a fragment thereof.
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35. The vector of claim 28 or 29, wherein said vector is a lentiviral vector.

36. The vector of claim 28 or 29, wherein said vector is a retroviral vector.

20 37. A cell transfected with the vector of any one of claims 28-36.

38. A method of inhibiting apoptosis in a cell comprising administering to the cell an siRNA which modulates apoptosis-related gene expression, thereby inhibiting apoptosis in a cell.

25 39. The method of claim 38, wherein said apoptosis-related gene expression is inhibited.

40. The method of claim 38, wherein said apoptosis-related gene is an anti-
30 apoptotic gene.

41. The method of claim 38, wherein said apoptosis-related gene is a pro-apoptotic gene.

42. The method of claim 41, wherein said apoptosis-related gene is a Fas pathway molecule, or a fragment thereof.

5 43. The method of claim 42, wherein said Fas pathway molecule is Fas or FasL, or a fragment thereof.

44. The method of claim 38, wherein said cell is a hepatocyte, a T-cell, a hematopoietic cell, a neural cell, or a malignant cell.

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45. The method of claim 38, wherein said inhibition of apoptosis-related gene expression is sustained for a prolonged period of time.

46. The method of claim 45, wherein said expression is sustained for at least
15 10 days.

47. A method of treating or preventing an apoptosis-mediated disease or disorder in a subject comprising administering to said subject a therapeutically or prophylactically effective amount of an siRNA which modulates apoptosis-related gene
20 expression so that expression of said apoptosis-related gene is inhibited.

48. A method of preventing allograft rejection in an allograft recipient comprising administering to the allograft recipient an siRNA which modulates apoptosis-related gene expression.

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49. The method of claim 47 or 48, wherein said apoptosis-related gene expression is inhibited.

50. The method of claim 47 or 48, wherein said apoptosis-related gene is an
30 anti-apoptotic gene.

51. The method of claim 47 or 48, wherein said apoptosis-related gene is a pro-apoptotic gene.

52. The method of claim 51, wherein said apoptosis-related gene is a Fas pathway molecule, or a fragment thereof.

5 53. The method of claim 52, wherein said Fas pathway molecule is Fas or FasL, or a fragment thereof.

54. The method of claim 47, wherein the disease or disorder is an immune or inflammatory disease.

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55. The method of claim 54, wherein said immune or inflammatory disease is hepatitis.

56. The method of claim 51, wherein said disease or condition is cancer.

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57. The method of claim 56, wherein said cancer is a cancer of the liver.

58. The method of claim 47, wherein said disease or condition is cirrhosis.

20 59. The method of claim 47, wherein the disease or condition is transplant rejection.

60. The method of claim 47, wherein said subject is a human.

25 61. The method of claim 47 or 48, wherein said siRNA is administered intravenously.

62. The method of claim 61, wherein said siRNA is administered by repeated intravenous injection.

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63. The method of claim 47, wherein said RNA interfering agent is administered after onset of said apoptosis-related disease or disorder.

64. The method of claim 48, wherein the allograft is an hepatic allograft.

65. A method of preventing rejection of an allograft by an allograft recipient comprising contacting the allograft *ex vivo* with an siRNA which modulates apoptosis-related gene expression.

66. The method of claim 65, wherein said apoptosis-related gene is Fas or FasL.

67. The method of claim 65, wherein the allograft is an hepatic allograft.

68. A method of treating or preventing proinflammatory cytokine mediated disease or disorder in a subject comprising administering to said subject a therapeutically or prophylactically effective amount of an siRNA which modulates proinflammatory cytokine expression so that expression of said proinflammatory cytokine is inhibited.

69. The method of claim 68, wherein said proinflammatory cytokine mediated disease or disorder is sepsis.

70. The composition of claim 69, wherein said proinflammatory cytokine is IL-1 or TNF α , or a fragment thereof.

71. The method of claim 68, wherein said subject is a human.